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CENTRAL FAX CENTER****JUL 13 2007****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE****Before the Board of Patent Appeals and Interferences****In re the Application**

Inventor : **BOYLE**
Application No. : **09/912,470**
Filed : **07/25/2002**
For : **WIRELESS TERMINAL**

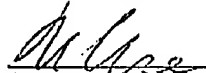
APPEAL BRIEF**On Appeal from Group Art Unit 2618****Date:** 07/13/2007

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Michael Ure
(Name)

 7/13/07
(Signature and Date)

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RELATED PROCEEDINGS

EVIDENCE

TABLE OF CASES

NONE

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I. REAL PARTY IN INTEREST

The real party in interest is NXP B.V., the successor in interest to the present assignee of record of the present application, Koninklijke Philips Electronics N.V., and not the party named in the above caption.

II. RELATED APPEALS AND INTERFERENCES

With regard to identifying by number and filing date all other appeals or interferences known to Appellant which will directly effect or be directly affected by or have a bearing on the Board's decision in this appeal, Appellant is not aware of any such appeals or interferences.

III. STATUS OF CLAIMS

Claims 2-9 and 19 are pending, all of which stand finally rejected and form the subject matter of the present appeal. Claim 1 and claims 10-18 have been canceled.

IV. STATUS OF AMENDMENTS

All amendments have been entered. No amendment after final rejection has been submitted.

V. SUMMARY of the CLAIMED SUBJECT MATTER

The present invention relates to an antenna arrangement for a wireless terminal. The wireless terminals includes a ground conductor and a transceiver coupled to an antenna feed, the antenna feed being capacitively coupled to the ground conductor by

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means of a conducting plate separate from and opposed to a portion of the ground conductor. The ground conductor may be a handset case or a PCB ground plane. By forming a slot in the ground conductor, impedance matching may be achieved. The resulting antenna arrangement enables wideband radiation from small antennas to be achieved in wireless terminals.

The following analysis of independent claim 19 is presented for convenience:

Element	Figure(s)	Paragraph(s) and/or page(s)
19. A wireless terminal comprising	Figs. 1 and 5	
a ground conductor and	Fig. 5, 502	Page 4, line 23 to page 5, line 2
a transceiver coupled to an antenna feed,	Fig. 1, 106; Fig. 5, 510	Page 3, lines 14-23; page 4, line 23 to page 5, line 2.
wherein the antenna feed is capacitively coupled to the ground conductor by means of a conducting plate separate from and opposed to a portion of the ground conductor.	Fig. 5, 504	Page 4, line 23 to page 5, line 2

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VI. GROUNDS of REJECTION to be REVIEWED ON APPEAL

The issues in the present matter are whether:

1. under 35 USC 102, claims 2-4, 7-9 and 19 are anticipated by Nghiem.
2. under 35 USC 103(a), whether claims 5 and 6 are unpatentable over Nghiem in view of Engblom.

Claims 2-9 and 19 were also provisionally rejected under the judicially-created doctrine of obviousness-type double patenting as being unpatentable over claims 2-9 of copending Application No. 10/056,096. This rejection is not appealed.

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VII. ARGUMENT

I. Rejection of Claims 2-4, 7-9 and 19 as Anticipated by Nghiem

Nghiem relates to an antenna arrangement of considerably different construction than that of the present invention. This arrangement is exemplified in the cover figure of Nghiem.

The cover figure of Nghiem shows an antenna arrangement 300 having the following elements:

Ref.	Element
304	conductor plate
308	first arm
312	second arm
316	ground plane
320	dielectric substrate (air)
324	bridge
328	probe (e.g., coax)--connects signal source to bridge
332	signal source

The foregoing elements are described at col. 5, line 45 to col. 8, line 16 of Nghiem.

It may be seen that Nghiem fails to show an antenna feed *capacitively coupled* to the ground conductor by means of a conducting plate *separate from* the ground conductor and opposed to a portion of the ground conductor. Nghiem, by contrast, teaches an arrangement in which the conducting plate is not separate from the ground conductor but rather one in which the conducting plate and the ground conductor are one and the same conductor.

Accordingly, Nghiem fails to anticipate claim 19.

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Nghiem further fails to anticipate claim 2, which recites that the antenna feed is coupled to the ground conductor via a capacitor. For a capacitor to be formed, the plate of the capacitor but be electrically insulated from one another. This is not the case in Nghiem.

Nghiem further fails to anticipate claim 3, which recites that the capacitor is a parallel plate capacitor formed by a conducting plate and a portion of the ground conductor.

Nghiem further fails to anticipate claim 4, which recites that the antenna feed is coupled to the ground conductor by capacitance between an inductive element and the ground conductor. No inductive element is shown in Nghiem.

Nghiem further fails to anticipate claim 7, which recites that the ground conductor is a handset case. Nghiem merely makes mention that the patch antenna is built into the top surface of the portable phone (col. 4, lines 29-35). There is no teaching that the ground conductor is the handset case.

Nghiem further fails to anticipate claim 8, which recites that the ground conductor is a printed circuit board ground plane. Nghiem makes no mention of a board, circuit board, or printed circuit board.

II. Rejection of Claims 5 and 6 as Being Unpatentable Over Nghiem in view of Engblom

It would not have been obvious to combine the teachings of Nghiem and Engblom in the manner suggested. The references rely upon significantly different feed arrangements. In Nghiem, a coax feed is connected to the bridge connecting the first and

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second arms of the conductor plate 304. This feed arrangement is important for operation of the antenna arrangement of Nghiem. Engblom, on the other hand, relates to an aperture-coupled antenna in which a feeding conductor 6 is located beneath a slot 5 in a ground plane 1. This feed arrangement is important for operation of the antenna arrangement of Engblom. There is no teaching or suggestion of how an antenna satisfying the disparate feed requirements of the two references might be arranged.

Therefore, it would not have been obvious to combine the teachings of the references in the manner suggested.

Claim 6 relates to the orientation of the slot, reciting that the slot is parallel to the major axis of the terminal. In Engblom Figure 1, the slot is *transverse* to the major axis of the terminal.

In view of the above, applicant submits that all of the above referred-to claims are patentable over the teachings of the cited references.


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VIII. CONCLUSION

In view of the above analysis, it is respectfully submitted that the referenced teachings, whether taken individually or in combination, fail to anticipate or render obvious the subject matter of any of the present claims. Therefore, reversal of all outstanding grounds of rejection is respectfully solicited.

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IX. APPENDIX: THE CLAIMS ON APPEAL

2. A terminal as claimed in claim 19, wherein the antenna feed is coupled to the ground conductor via a capacitor.
3. A terminal as claimed in claim 2, wherein the capacitor is a parallel plate capacitor formed by a conducting plate and a portion of the ground conductor.
4. A terminal as claimed in claim 19, wherein the antenna feed is coupled to the ground conductor by capacitance between an inductive element and the ground conductor.
5. A terminal as claimed in claim 19, wherein a slot is provided in the ground conductor.
6. A terminal as claimed in claim 19, wherein the slot is parallel to the major axis of the terminal.
7. A terminal as claimed in claim 19, wherein the ground conductor is a handset case.
8. A terminal as claimed in claim 19, wherein the ground conductor is a printed circuit board ground plane.
9. A terminal as claimed in claim 19, wherein a matching network is provided between the transceiver and the antenna feed.

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19. A wireless terminal comprising a ground conductor and a transceiver coupled to an antenna feed, wherein the antenna feed is capacitively coupled to the ground conductor by means of a conducting plate separate from and opposed to a portion of the ground conductor.

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X. APPENDIX: RELATED PROCEEDINGS

NONE

XI. APPENDIX: EVIDENCE

NONE